

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A computer system for generating recommendations, the system comprising:
 - a rule system for defining a set of rules, each rule having a predicate component and an action component,
 - a set of recommendation systems, and
 - a defined interface for accessing each of the recommendation systems in said set of recommendation systems to permit a one of the recommendation systems to be invoked from an action component in a rule in the set of rules in the rule system.
2. (original) The computer system of claim 1 in which the set of recommendation systems comprises one or more empirical recommendation systems.
3. (original) The computer system of claim 2, further comprising a set of connections, each connection comprising a means for passing data from the rule system to a one of the empirical recommendation systems for processing by the empirical recommendation system.
4. (original) The computer system of claim 3 in which the means for passing data from the rule system to the empirical recommendation system comprises an event-listener connection.
5. (original) The computer system of claim 4 in which the rule system comprises rules for receiving events, rules for filtering events and rules for forwarding events to a one of the empirical recommendation systems.
6. (original) The computer system of claim 2 in which the rule system comprises rules for preprocessing data prior to accessing a one of the empirical recommendation systems.
7. (original) The computer system of claim 2 in which the rule system comprises rules for postprocessing data following the access of a one of the empirical recommendation systems.
8. (original) The computer system of claim 2 in which the defined interface comprises a definition of means for obtaining recommendations based on a specified user from the one or more empirical recommendation systems.
9. (original) The computer system of claim 2 in which the defined interface comprises a definition of means for the one or more empirical recommendation systems to prioritize items based on a specified user.

10. (original) The computer system of claim 3 in which the recommendations of the computer system are provided to a web-based display system for the display of pages to a shopper in an electronic commerce site maintained for an on-line store.

11. (original) The computer system of claim 10 in which the defined interface defines a means to make available to the one or more empirical recommendation systems the following:

- a) data uniquely identifying the shopper,
- b) data uniquely identifying the store, and
- c) a specified maximum number of recommendations.

12. (original) The computer system of claim 11 in which the defined interface defines a means to make available to selected ones of the one or more empirical recommendation systems one or more of the following:

- a) a set of initial recommendations,
- b) a set of category information for constraining the recommendations to be returned, and
- c) information about the environment from which the rule system was invoked.

13. (original) A computer system for generating recommendations for personalization of an e-commerce site, the system comprising,

a rule system for defining a set of rules, each rule having a predicate component and an action component,

a set of empirical recommendation systems,

a defined interface for accessing each of the empirical recommendation systems in said set of empirical recommendation systems to permit a one of the empirical recommendation systems to be invoked from an action component in a rule in the set of rules in the rule system, and

a set of event-listener connections, each connection comprising a means for passing data from the rule system to the empirical recommendation system for processing by the empirical recommendation system.

14. (original) The computer system of claim 13 in which the rule system comprises rules for preprocessing data prior to accessing a one of the empirical recommendation systems.

15. (original) The computer system of claim 13 in which the rule system comprises rules for postprocessing data following the access of a one of the empirical recommendation systems.

16. (original) The computer system of claim 13 in which the defined interface comprises a definition of means for obtaining recommendations from the set of empirical recommendation systems based on a specified user accessing the e-commerce site.

17. (original) The computer system of claim 13 in which the defined interface comprises a definition of means for the set of empirical recommendation systems to prioritize items based on a specified user accessing the e-commerce site.

18. (original) The computer system of claim 13 in which the recommendations of the computer system are provided to a web-based display system for the display of pages to a user accessing the e-commerce site.

19. (original) The computer system of claim 13 in which the defined interface defines a means to make available to the set of empirical recommendation systems the following:

- a) data uniquely identifying a consumer accessing the e-commerce site,
- b) data uniquely identifying the e-commerce site, and
- c) a specified maximum number of recommendations.

20. (original) The computer system of claim 19 in which the defined interface defines a means to make available to selected ones of the set of empirical recommendation systems one or more of the following:

- a) a set of initial recommendations,
- b) a set of category information for constraining the recommendations to be returned, and
- c) information about the environment from which the rule system was invoked.

21. (cancel) A computer program product for providing recommendations, the computer program product comprising a computer usable medium having computer readable code means embodied in said medium, comprising computer readable program code means for implementing the computer system in any of claims 1 to 20.

22. (original) A method for generating a set of personalization recommendations using a rule system, and a set of empirical recommendation systems, the rule system comprising rules having predicates and actions, the method comprising the steps of:

defining an interface to permit the empirical recommendation systems in said set of empirical recommendation systems to be called from the rule system,

defining a set of rules in the rule system, selected rules in the set of rules comprising calls using the interface to the empirical recommendation systems, and

invoking the rule system to provide a set of personalization recommendations by evaluating rule predicates and firing rule actions in the rule system and to call one or more of the empirical recommendation systems as defined in the fired rule actions

23. (original) The method of claim 22 where the step of calling an empirical recommendation system defined in a fired rule action further comprises the step of establishing an event-listener connection to the empirical recommendation system to permit data to be provided to the empirical recommendation system.

24. (original) The method of claim 23 in which the step of defining rules in the rule system further comprises the step of defining preprocessing rules for preprocessing event data before passing an event to the empirical recommendation system.

25. (original) The method of claim 23 in which the step of defining rules in the rule system further comprises the step of defining postprocessing rules for postprocessing recommendations provided by the empirical recommendation system.

26. (cancel) A computer program product for providing recommendations, the computer program product comprising a computer usable medium having computer readable code means embodied in said medium, comprising computer readable program code means for implementing the method of claims 22, 23, 24 or 25.

27. (cancel) A computer program comprising computer program code means adapted to perform the steps of any of claims 22 to 25 when said program is run on a computer system.

28. (new) A computer program product comprising a computer usable medium having computer readable code means embodied in said medium, comprising computer readable program code means for generating recommendations, the computer readable program code means directing a computer to perform the steps of:

defining a set of rules in a rule system, each rule having a predicate component and an action component; and

defining an interface for accessing each recommendation system in a set of recommendation systems to permit at least one recommendation system from the set of recommendation systems to be invoked from an action component in a rule in the set of rules in the rule system.

29. (new) The computer program product of claim 28 in which the set of recommendation systems comprises one or more empirical recommendation systems.

30. (new) The computer program product of claim 29, further comprising passing data from the rule system to a one of the empirical recommendation systems for processing by the empirical recommendation system.

31. (new) The computer program product of claim 30 wherein passing data from the rule system to the empirical recommendation system utilizes an event-listener connection.

32. (new) The computer program product of claim 31 in which the rule system comprises rules for receiving events, rules for filtering events and rules for forwarding events to a one of the empirical recommendation systems.

33. (new) The computer program product of claim 29 in which the rule system comprises rules for preprocessing data prior to accessing a one of the empirical recommendation systems.

34. (new) The computer program product of claim 29 in which the rule system comprises rules for postprocessing data following the access of a one of the empirical recommendation systems.
35. (new) The computer program product of claim 29 in which the defined interface comprises a definition of means for obtaining recommendations based on a specified user from the one or more empirical recommendation systems.
36. (new) The computer program product of claim 29 in which the defined interface comprises a definition of means for the one or more empirical recommendation systems to prioritize items based on a specified user.
37. (new) The computer program product of claim 30 in which the recommendations are provided to a web-based display system for the display of pages to a shopper in an electronic commerce site maintained for an on-line store.
38. (new) The computer program product of claim 37 in which the defined interface defines a means to make available to the one or more empirical recommendation systems the following:
 - a) data uniquely identifying the shopper;
 - b) data uniquely identifying the store; and
 - c) a specified maximum number of recommendations.
39. (new) The computer program product of claim 38 in which the defined interface defines a means to make available to selected ones of the one or more empirical recommendation systems one or more of the following:
 - a) a set of initial recommendations;
 - b) a set of category information for constraining the recommendations to be returned; and
 - c) information about the environment from which the rule system was invoked.
40. (new) A computer program product comprising a computer usable medium having computer readable code means embodied in said medium, comprising computer readable program code means for generating recommendations for personalization of an e-commerce site, the computer readable program code means directing a computer to perform the steps of:
 - defining a set of rules in a rule system, each rule having a predicate component and an action component;
 - defining an interface for accessing each empirical recommendation system in a set of empirical recommendation systems to permit at least one empirical recommendation system from the set of empirical recommendation systems to be invoked from an action component in a rule in the set of rules in the rule system; and
 - listening for events utilizing a set of event-listener connections, each connection comprising a means for passing data from the rule system to the at least one empirical recommendation system for processing by the empirical recommendation system.

41. (new) The computer program product of claim 40 in which the rule system comprises rules for preprocessing data prior to accessing an empirical recommendation system from the set of empirical recommendation systems.

42. (new) The computer program product of claim 40 in which the rule system comprises rules for postprocessing data following the access of an empirical recommendation systems from the set of empirical recommendation systems.

43. (new) The computer program product of claim 40 in which the defined interface comprises a definition of means for obtaining recommendations from the set of empirical recommendation systems based on a specified user accessing the e-commerce site.

44. (new) The computer program product of claim 40 in which the defined interface comprises a definition of means for the set of empirical recommendation systems to prioritize items based on a specified user accessing the e-commerce site.

45. (new) The computer program product of claim 40 in which the recommendations are provided to a web-based display system for the display of pages to a user accessing the e-commerce site.

46. (new) The computer program product of claim 40 in which the defined interface defines a means to make available to the set of empirical recommendation systems the following:

- a) data uniquely identifying a consumer accessing the e-commerce site;
- b) data uniquely identifying the e-commerce site; and
- c) a specified maximum number of recommendations.

47. (new) The computer program product of claim 46 in which the defined interface defines a means to make available to selected ones of the set of empirical recommendation systems one or more of the following:

- a) a set of initial recommendations;
- b) a set of category information for constraining the recommendations to be returned; and
- c) information about the environment from which the rule system was invoked.